UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,974	05/23/2001	Robert J. Gartside	1094-10	1412

7590 07/24/2002

Peter G. Dilworth
DILWORTH & BARRESE, LLP
333 Earle Ovington Blvd.
Uniondale, NY 11553

EXAMINER
NGUYEN, CAM N

ART UNIT	PAPER NUMBER
1754	3

DATE MAILED: 07/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/863,974	Applicant(s) Gartside et al.
	Examiner Cam Nguyen	Art Unit 1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *three* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *5/23/01 & a telephone election on 6/21/02*.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above, claim(s) *13-21* is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-12* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *May 23, 2001* is/are a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892) 3
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 2
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-12, drawn to a process for activating a basic metal oxide isomerization catalyst and a catalyst thereof, classified in class 502, subclass 34+.

II. Claims 13-21, drawn to a process for isomerizing an olefinic feedstock using a catalyst, classified in class 585, subclass 664+.

The inventions are distinct, each from the other because:

2. Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the product as claimed can be used in a materially different process of using that product, such as the process of disproportionation of paraffins.

3. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, and have acquired a separate status in the art as shown by their different classification, and because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

4. In accordance with M.P.E.P. 812.01, a telephone call was made by ***Examiner Thuan Dang (Art Unit 1764)*** to applicant(s) Attorney/Agent ***Mr. Calderone*** on ***June 21, 2002*** a

provisional election was made ***with traverse*** to prosecute the invention of Group I, claims 1-12. Affirmation of this election must be made by applicant in replying to this Office action. Claims 13-21 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

Claim Rejections - 35 USC § 102(b)/103

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 10-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sun (U.S Pat. 4,778,943).

Sun discloses regenerated (or activated) isomerization catalysts comprising at least one alkaline earth metal oxide including Mg, Ca, and Ba (see col. 1, ln 41-50 & col. 3, ln 41-44).

Recitation of product-by-process limitation in the claims is noted. While the product of the reference is not made by the same process as being claimed, the product made is the same. It has been held that "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even the prior art product was made by a different process." See *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). See also *In re Brown*, 173 USPQ 688, 688 (CCPA 1977), *In re Fessman*, 180 USPQ 324, 326 (CCPA 1977), & MPEP 2113.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun (U.S Pat. 4,778,943) *taken together with* Guth et al., "hereinafter Guth", (U.S Pat. 5,953,911).

Sun discloses that the isomerization catalysts comprising at least one alkaline earth metal oxide including Mg, Ca, and Ba can be regenerated (or activated) by heating in an oxygen-containing gas at temperatures ranging from about 200°C to about 700°C (see col. 1, ln 41-50 & col. 3, ln 41-44). Thus, Sun teaches a process of activating a basic metal oxide isomerization catalyst as being claimed.

Sun is silent with respect to the limitation on "a dry inert gas containing not more than about 5 ppm molecular oxygen by volume", "no more than about 2 ppm of molecular oxygen", and "no more than about 1 ppm of molecular oxygen" in claims 1, 2, & 3, respectively. However, it would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have utilized a regeneration gas, such as nitrogen, having a concentration of from about 50% to about 80% and containing substantially oxygen free with up to 1% oxygen present without significant negative effects, as taught by Guth in order to efficiently activating the basic metal oxide isomerization catalyst of Sun, because Guth fairly suggests that such regeneration gas containing nitrogen and oxygen concentrations provides an excellent carrier for the reductants (see Guth at col. 3, ln 6-30). There is a motivation to combine the teaching of the Guth reference with the Sun reference because Guth teaches his catalyst also contains alkaline earth metal compounds (see Guth at col. 4, ln 36-37).

It is considered the claimed oxygen contents are met by the teaching of the reference since Guth teaches the regeneration gas is "substantially oxygen free" (see Guth at col. 3, ln 28). The word "substantially free" encompasses the oxygen amounts that applicants claiming.

Regarding claim 4, the claim is met by the teaching of the reference because Guth teaches a regeneration gas containing nitrogen (see Guth at col. 3, ln 6-30).

Regarding claim 5, the claimed temperature is met by the teaching of the reference since the claimed temperature falls within the disclosed temperature range (see Sun at col. 1, ln 41-50 & col. 3, ln 41-44).

Regarding claims 6 & 7, the claimed basic metal oxides are met by the teaching of the reference because Sun teaches isomerization catalysts comprising alkaline earth metals including the magnesium oxide, calcium oxide, and barium oxide that applicants claiming (see Sun at col. 1, ln 41-50).

10. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun (U.S Pat. 4,778,943) *taken together with* Guth et al., "hereinafter Guth", (U.S Pat. 5,953,911), as applied to claims 1-7 above, and further in view of Didillon (U.S Pat. 5,573,988).

Sun teaches a process of regenerating or activating a basic metal oxide isomerization catalyst as described above, except for the following differences.

Sun does not disclose "decoking the catalyst... by contacting the catalyst with an inert gas combined with at least about 2 percent by weight molecular oxygen at a temperature of at least

about 460°C for at least about 6 hours" and "contacting the catalyst with an inert gas combined with at least about 20 percent by weight molecular oxygen at a temperature of at least about 500°C for at least about 18 hours", respectively.

However, it would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have treated the catalyst of Sun in the same manner in order to reduce the carbon amounts deposited on the catalyst to result in a more effective catalyst, because it is known in Didillon to treat a similar coked catalyst at a temperature of between 250°C and 600°C in a gas stream containing at least oxygen and chlorine, wherein the oxygen content in said gas is between 0.3% to 51% (molar), preferably between 1% and 22% (molar), to result in essentially complete decoking of the catalyst (see Didillon at col. 3, ln 24-36). There is a motivation for combining the teaching of the Didillon reference with the Sun reference because Didillon teaches his catalyst also contains magnesium oxide (see Didillon at col. 2, ln 43).

The claimed temperature is met by the teaching of the reference since it falls within the disclosed temperature range (see Didillon at col. 3, ln 24-36).

The claimed oxygen content is met by the teaching of the reference since the claimed oxygen contents fall within the disclosed oxygen contents (see Didillon at col. 3, ln 24-36).

With respect to the claimed treatment duration time, Didillon does not disclose the treatment time. However, it would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have predetermined the time required for such treatment since time is temperature dependent.

Citations

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 Form attached to the Office Action. All references listed, but not relied upon are cited for related art.

Conclusion

12. Claims 1-21 are pending in the application. Claims 1-12 are rejected. Claims 13-21 are withdrawn from consideration due to nonelected (distinct) invention. No claims are allowed.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Cam Nguyen, whose telephone number is (703) 305-3923. The examiner can normally be reached on M-F from 8:30 am. to 6:00 pm, with alternative Monday off.

The appropriate fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 (before finals) and (703) 872-9311 (after-final).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Nguyen/cnn CNN
July 22, 2002

Cam Nguyen
Patent Examiner

Election/Restriction

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-12, drawn to a method of making a catalyst and a catalyst, classified in class 502, subclass 300+.

II. Claims 13-21, drawn to an isomerization of olefins, classified in class 585, subclass 664+.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product can be used in a materially different process such as the process of disproportionation of paraffins.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Calderone on 06/21/02 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-12. Affirmation of this election must be made by applicant in responding to this Office action. Claims 13-21 are

withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.